WHAT IS CLAIMED IS:

1. An ink jet printing apparatus capable of mounting a printing head having a plurality of ink discharging ports for discharging ink, electrothermal energy converting elemens provided corresponding to each of said plurality of ink discharging ports being energized, and then generating a bubble in the ink to discharging ink; said energization means, comprising:

a single driving power source serving as a source of supplying said electrical energy; and

a control unit for controlling the electrical energy supplied from said driving power source;

wherein said control unit performs a control for supplying said electrothermal energy converting element with such an electrical energy that generates a bubble to the extent that ink droplets are discharged from the ink discharge ports, if the electrothermal energy converting element is driven to accomplish printing;

wherein said control unit performs a control for supplying said electrothermal energy converting element with such an electrical energy that generates a bubble to the extent that ink droplets are not discharged from the ink discharge ports; and

wherein said controls are selectively performed.

2. The ink jet printing apparatus according to claim

1, wherein said control unit is provided with at least two voltage generating means for generating a high voltage and a low voltage, respectively, and either one of the two different voltages generated by each of corresponding said voltage generating means is selectively applied to said electrothermal energy converting element.

3. The ink jet printing apparatus according to claim 2, wherein said voltage generating means is provided with a voltage drop generating means for generating at least one type of voltage lower than the voltage supplied by the driving power source and either the voltage supplied by said driving power source or the voltage obtained through said voltage drop generating means is selectively supplied to driving means for supplying or shutting down voltage supply for said electrothermal energy converting element.

4. The ink jet printing apparatus according to either one of claims 1 and 3, wherein said control unit is provided with energization time control means for selecting either a long period of time or a short period of time, during which the voltage generated by said voltage generating means is applied, and said energization time control means sets en energization time valid when a lower voltage of the high and low voltages generated by said voltage generating means is selected longer than the energization time valid when the higher voltage is selected.

5. The ink jet printing apparatus according to claim 4, wherein the energization time set when the low voltage is provided by said voltage generating means is established through selection from among bubble forming times available in a type having the lowest applied voltage out of two types approximated with two substantially straight lines and a type resident in a boundary area of these two types when an applied voltage-to-bubble forming starting time characteristics of said electrothermal energy converting element are plotted on a double logarithmic chart.

6. An ink jet printing method using a printing head having a plurality of ink discharging ports for discharging ink, electrothermal energy converting elements provided corresponding to each of said plurality of ink discharging ports being energized, and then generating a bubble in the ink to discharge ink; comprising the steps of:

first step for supplying said electrothermal energy converting element with such an electrical energy that generates a bubble to the extent that ink droplets are discharged from the nozzle, if the electrothermal energy converting element is driven to accomplish recording; and

second step for supplying said electrothermal energy converting element with such an electrical energy that generates bubbles to the extent that ink droplets are not discharged from the nozzle;

wherein said first step and second step are selectively performed.

7. An ink jet printing apparatus capable of mounting a printing head having a plurality of ink discharging ports for discharging ink, electrothermal energy converting elemens provided corresponding to each of said plurality of ink discharging ports being energized, and then generating a bubble in the ink to discharge ink;

wherein said energization means generates driving signals for supplying said electrothermal energy converting elements corresponding to low use frequency ink discharging ports with such an electrical energy that generates bubbles in ink in said low use frequency ink discharging ports to the extent that ink droplets are not discharged from said low use frequency ink discharging ports.

8. The ink jet printing apparatus according to claim 7, wherein said energization means is provided with a voltage generating means for generating at least a high voltage and a low voltage and voltage selecting means capable of applying selectively either of the two different voltages generated by said voltage generating means to said electrothermal energy converting element.

9. The ink jet printing apparatus according to claim 8, wherein said energization means is provided with

energization time control means for selecting either a long period of time or a short period of time, during which the voltage generated by said voltage generating means is applied, and said energization time control means sets en energization time valid when a lower voltage of the high and low voltages generated by said voltage generating means is selected longer than the energization time valid when the higher voltage is selected.

10. The ink jet printing apparatus according to claim 9, wherein the energization time, set when the lower voltage of the high and low voltages generated by said voltage generating means is selected, is established through selection from among bubble forming times available in a type having the lowest applied voltage out of two types approximated with two substantially straight lines and a type resident in a boundary area of these two types when an applied voltage-to-bubble forming starting time characteristics of said electrothermal energy converting element are plotted on a double logarithmic chart.

11. An ink jet printing method, comprising a printing head forming a plurality of ink discharging ports for discharging ink, each of said plurality of ink discharging ports being provided with an electrothermal energy converting element, said electrothermal energy converting element being energized and then generating a

bubble in the ink to discharge ink,

wherein said energization means generates driving signals for supplying said electrothermal energy converting elements corresponding to low use frequency ink discharging ports with such an electrical energy that generates bubbles in ink in said low use frequency ink dischartging ports to the extent that ink droplets are not discharged from said low use frequency ink discharging ports.

12. The ink jet printing method according to claim 11, wherein said electrothermal energy converting element is energized with at least either a high voltage or a low voltage applied selectively thereto.

13. The ink jet printing method according to claim 12, wherein an energization time set when, of the high and the low voltages applied to said electrothermal energy converting element, the low voltage is selected is longer than an energization time set when the high voltage is selected.

14. The ink jet printing method according to claim 13, wherein the energization time, set when the lower voltage of the high and low voltages generated by said voltage generating means is selected, is established through selection from among bubble forming starting times available in a type having the lowest applied voltage out

of two types approximated with two substantially straight lines and a type resident in a boundary area of these two types when an applied voltage-to-bubble forming starting time characteristics of said electrothermal energy converting element are plotted on a double logarithmic chart.